

Fransen AF, van de Ven J, Meriën AE, de Wit-Zuurendonk LD, Houterman S, Mol BW, Oei SG. Effect of obstetric team training on team performance and medical technical skills: a randomised controlled trial.

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OBJECTIVE:

To determine whether obstetric team training in a medical simulation centre improves the team performance and utilisation of appropriate medical technical skills of healthcare professionals.

DESIGN:

Cluster randomised controlled trial.

SETTING:

The obstetric departments of 24 Dutch hospitals.

METHODS:

The obstetric departments were randomly assigned to a 1-day session of multiprofessional team training in a medical simulation centre or to no such training. Team training was given with high-fidelity mannequins by an obstetrician and a communication expert. More than 6 months following training, two unannounced simulated scenarios were carried out in the delivery rooms of all 24 obstetric departments. The scenarios, comprising a case of shoulder dystocia and a case of amniotic fluid embolism, were videotaped. The team performance and utilisation of appropriate medical skills were evaluated by two independent experts.

MAIN OUTCOME MEASURES:

Team performance evaluated with the validated Clinical Teamwork Scale (CTS) and the employment of two specific obstetric procedures for the two clinical scenarios in the simulation (delivery of the baby with shoulder dystocia in the maternal all-fours position and conducting a perimortem caesarean section within 5 minutes for the scenario of amniotic fluid embolism).

RESULTS:

Seventy-four obstetric teams from 12 hospitals in the intervention group underwent teamwork training between November 2009 and July 2010. The teamwork performance in the training group was significantly better in comparison to the nontraining group (median CTS score: 7.5 versus 6.0, respectively; $P = 0.014$). The use of the predefined obstetric procedures for the two clinical scenarios was also significantly more frequent in the training group compared with the nontraining group (83 versus 46%, respectively; $P = 0.009$).

CONCLUSIONS:

Team performance and medical technical skills may be significantly improved after multiprofessional obstetric team training in a medical simulation centre.